

**STANDARDS PRESENTATION  
TO  
CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD**

Attachment No. 1

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PROPOSED STATE STANDARD,  
TITLE 8, CHAPTER 4

Amend Section 5147 to read:

§ 5147. Respiratory Protection for M. Tuberculosis.

Section 5144, Respiratory Protection, applies to M. Tuberculosis after this section is repealed on October 18, 2004.

This section applies to respiratory protection against M. tuberculosis and applies in lieu of section 5144.

(a) When and Where to Be Worn. When it is clearly impracticable to remove harmful dusts, fumes, mists, vapors, or gases at their source, as required in Sections 5141 and 5143 or where emergency protection against occasional and/or relatively brief exposure is needed, the employer shall provide, and the employee exposed to such hazard shall use, approved respiratory equipment.

(b) Approved Equipment. Whenever respirators are required to be used to control harmful exposures, only respiratory equipment approved for that purpose shall be used and such equipment shall be approved by the Mining Enforcement and Safety Administration or the National Institute for Occupational Safety and Health, Department of Health, Education, and Welfare. Only parts approved for the specific respirator system shall be used for replacement. Approval of equipment for which the above agencies have not established standards shall be contingent upon proof of its merits satisfactory to the Division. (See Section 3206).

(c) Education and Training. Employees shall be instructed and trained in the need, use, sanitary care, and limitations of such respiratory equipment as any employee may have the occasion to use. Respirators shall be inspected before each use and shall not be worn when conditions prevent a good gas-tight face seal. Every respirator wearer shall be instructed in how to properly fit and test respiratory equipment and how to check the facepiece fit and shall be provided the opportunity to wear respiratory equipment in normal air for an adequate familiarity period, and to wear it in a test atmosphere (such as generated by smoke tubes or isoamyl acetate).

(d) Maintenance and Sanitation.

(1) The employer shall provide, repair, or replace respiratory protective equipment as may be required due to wear and deterioration.

(2) Respirators maintained for emergency use shall be inspected and sanitized after each use and inspected at least monthly. A record of the most recent inspection shall be maintained on the respirator or its storage container, and shall include the inspector's identification, the date and a respirator identification number.

(3) The employer shall provide means for cleaning all respiratory protective equipment. Routinely used respiratory equipment shall be regularly cleaned, inspected, and sanitized by a qualified individual. Respiratory equipment shall not be passed on from one person to another until it has been cleaned and sanitized.

(4) When not in use, respirators shall be stored to protect against dust, sunlight, extreme temperatures, excessive moisture, or damaging chemicals.

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(5) Cylinders shall be tested and maintained as prescribed in the Shipping Container Specification Regulations of the Department of Transportation (49 CFR Part 178).

(e) Air Quality.

(1) Compressed air, compressed oxygen, liquid air, and liquid oxygen used for respiration shall be of high purity. Breathing air shall meet at least the requirements of the specification for Grade D breathing air as described in Compressed Gas Association Commodity Specification G-7.1 (ANSI Z86.1-1973).

(2) Breathing gas containers shall be legibly identified with the word AIR or OXYGEN as appropriate in letters at least 1/25 the diameter of the cylinder but in no case less than 1/8", by means of stenciling, stamping or labeling as near the valve end as practical. Marking in accordance with Federal Specification BB-A-1034a, June 21, 1968, Air, Compressed for Breathing Purposes; or Interim Federal Specification GG-B-0067b, April 27, 1965, Breathing Apparatus, Self-Contained may also be used.

(3) The compressor for supplying air shall be equipped with necessary safety and standby devices. Compressors shall be constructed and situated so as to avoid entry of contaminated air into the system and suitable in-line air purifying sorbent beds and filters installed to further assure breathing air quality. Alarms to indicate compressor failure shall be installed in the system. A receiver of sufficient capacity to enable the respirator wearer to exit from a contaminated atmosphere shall be provided. If an oil-lubricated compressor is used, it shall be equipped with a continuous reading carbon monoxide monitoring system set to alarm should the carbon monoxide concentration exceed 20 ppm or a high temperature alarm which will activate when the discharge air temperature exceeds 110% of the normal operating temperature in degrees Fahrenheit, or both. If only the high temperature alarm is used, the air from the compressor (while operating at normal temperature) shall be tested for carbon monoxide weekly or for each use whichever is less frequent. Records of the results of such tests shall be maintained for the previous 6 months. Alarm systems required in this section shall be tested at least monthly.

EXCEPTION: The requirement for compressor failure alarms and a receiver do not apply to compressors which are used to supply breathing air to supplied air respirators used in atmospheres not immediately dangerous to life or health.

(4) Air-line couplings shall be incompatible with outlets for other gas systems to prevent inadvertent servicing of air-line respirators with nonrespirable gases or oxygen.

(5) The air pressure at the hose connection to positive-pressure respiratory equipment shall be within the range specified in the approval of the equipment.

(f) Respiratory Protection Program.

(1) Written operating procedures governing the selection and use of respirators shall be established and shall include procedures for selection, instruction and training, cleaning and sanitizing, inspection and maintenance.

(2) Selection and Issuance of Respirators. Proper selection of respirators shall be made according to the guidance of American National Standard Practices for Respiratory Protection:

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Z88.2-1969. The correct respirator shall be specified for each job. The individual issuing them shall be adequately instructed to insure that the correct respirator is used.

(3) Program Surveillance and Evaluation. Appropriate surveillance of environmental conditions in the work area, such as increases in exposure concentration or the introduction of other toxic substances, or other conditions which increase the degree of employee exposure or stress shall be maintained. The program effectiveness shall be evaluated by regular inspections.

(g) Atmospheres Immediately Hazardous to Life or Health. In atmospheres immediately hazardous to life or health, at least two persons equipped with approved respiratory equipment shall be on the job. Communications shall be maintained between both or all individuals present. Standby persons, at least one of which shall be in a location which will not be affected by any likely incidents, shall be present with suitable rescue equipment including self-contained breathing apparatus.

(h) Medical Limitations. Persons should not be assigned to tasks requiring use of respirators unless it has been determined that they are physically able to perform the work while using the required respiratory equipment. A licensed physician shall determine what health and physical conditions are pertinent. The medical status of persons assigned use of respiratory equipment should be reviewed at least annually.

(i) Labeling Gas Mask Canisters. Gas mask canisters shall be labeled and color coded as indicated in Table 1 before they are placed in service. The canister label shall include the following information:

In bold letters

(1) "Canister for \_\_\_\_\_"  
(Name for Atmospheric Contaminant)  
or

"Type N Gas Mask Canister"

(2) "For Respiratory Protection in Atmospheres Containing Not More  
Than \_\_\_ Percent by Volume of \_\_\_\_\_"  
(Name of Contaminant)

Each canister shall have a label warning that gas masks should be used only in atmospheres containing sufficient oxygen to support life. Canisters having a special high-efficiency filter for protection against radionuclides and other highly toxic particulates shall be labeled with a statement of the type and degree of protection afforded by the filter.

TABLE 1

*Atmospheric Contaminants to be  
Protected Against*

Acid gases.....  
Hydrocyanic acid gas.....

*Colors Assigned \**

White.  
White with 1/2-inch green Hydrostripe completely  
around the canister near the bottom.

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Chlorine gas.....	White with 1/2-inch yellow stripe completely around the canister near the bottom.
Organic vapor.....	Black.
Ammonia gas.....	Green.
Acid gases and ammonia gas.....	Green with 1/2-inch white Acid stripe completely around the canister near the bottom.
Carbon monoxide.....	Blue.
Acid gases and organic vapors.....	Yellow.
Hydrocyanic acid gas and chloropicrin vapor.....	Yellow with 1/2-inch blue stripe completely around the canister near the bottom.
Acid gases, organic vapors, and ammonia gases.....	Brown.
Radioactive materials, excepting tritium and noble gases.....	Purple (Magenta).
Particulates (dusts, fumes, mists, fogs or smokes) in combination with any of the above gases or vapors.....	Canister color for contaminant, as designated above, with 1/2-inch gray stripe completely around the
<i>Atmospheric Contaminants to be Protected Against</i>	<i>Colors Assigned *</i> canister near the top.
All of the above atmospheric contaminants...	Red with 1/2-inch gray stripe completely around the canister near the top

\* Gray shall not be assigned as the main color for a canister designed to remove acids or vapors.

NOTE: Orange shall be used as a complete body, or stripe color to represent gases not included in this table. The user will need to refer to the canister label to determine the degree of protection the canister will afford.

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.